

Appl. No. : 10/642,399
Filed : August 15, 2003

AMENDMENTS TO THE CLAIMS

1-12. (Canceled)

13. (Currently amended) A prosthesis for minimally invasive posterior fixation, comprising:

a bone anchor having a head;

a transverse portal extending through said head along an axis transverse to a central axis of said bone anchor, said transverse portal being substantially closed with respect to the central axis of said bone anchor;

a first segment of a rod extending through said transverse portal, said first segment defining a first surface;

a second segment of a rod having a second complementary surface;

a joint formed at least in part by said first surface and said second surface; and

a locking cap which in response to lateral movement secures said first segment within said portal and fixes the angular relationship of the joint.

14. (Currently amended) A prosthesis for minimally invasive posterior fixation, comprising:

a bone anchor having a head;

a transverse portal extending through said head along an axis transverse to a central axis of said bone anchor;

a first segment of a rod extending through said transverse portal, said first segment defining a first surface;

a second segment of a rod having a second complementary surface;

a joint formed at least in part by said first surface and said second surface; and

a locking cap which in response to lateral movement secures said first segment within said portal and fixes the angular relationship of the joint;

~~The prosthesis of Claim 13,~~ wherein said first segment further comprises at least one compression gap.

15. (Original) The prosthesis of Claim 13, wherein said rod is adapted to be detachably secured to an insertion tool used to insert said rod into said portal.

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16. **(Currently amended)** The prosthesis of Claim 13, ~~wherein~~ further comprising a third segment of ~~[[a]]~~ the rod, said third segment defining a socket for receiving a ball positioned on said second segment.

17. **(Original)** The prosthesis of Claim 16, further comprising a second bone anchor having a head, a transverse portal and a locking cap which in response to lateral movement secures said third segment within the portal of the second bone anchor and fixes the angular relationship between the third and second segments.

18. **(Original)** The prosthesis assembly of Claim 17, wherein the third segment is configured to be secured to an insertion tool used to insert said rod into said portals of said bone anchors.

19-45. **(Canceled)**

46. **(New)** The prosthesis of Claim 13, wherein said first segment and second segment include a central lumen, which is configured such that the first and second segments can be advanced over a guidewire.

47. **(New)** The prosthesis of Claim 13, wherein said first segment has distal end and said transverse portal is configured such that said distal end of said first segment can be advanced through a first end of said portal.

48. **(New)** The prosthesis of Claim 13, wherein said first segment has distal end and said transverse portal is configured such that said distal end of said first segment can be advanced entirely through said transverse portal.

49. **(New)** The prosthesis of Claim 17, wherein said first segment, said second segment and said third segment include a central lumen, which is configured such that said first second and third segments can travel over a guidewire.

50. **(New)** The prosthesis of Claim 17, wherein the transverse portal of said second bone anchor is substantially closed with respect to a central axis of said second bone anchor.

51. **(New)** The prosthesis of Claim 51, wherein said first segment, said second segment and said third segment include a central lumen, which is configured such that said first second and third segments can travel over a guidewire.

52. (New) The prosthesis of Claim 17, wherein said first segment has distal end and said transverse portal of said second bone anchor is configured such that said distal end of said first segment can be advanced entirely through said transverse portal of said second bone anchor.

53. (New) The prosthesis of Claim 14, wherein said rod is adapted to be detachably secured to an insertion tool used to insert said rod into said portal.

54. (New) The prosthesis of Claim 14, further comprising a third segment of the rod, said third segment defining a socket for receiving a ball positioned on said second segment.

55. (New) The prosthesis of Claim 54, further comprising a second bone anchor having a head, a transverse portal and a locking cap which in response to lateral movement secures said third segment within the portal of the second bone anchor and fixes the angular relationship between the third and second segments.

56. (New) The prosthesis assembly of Claim 55, wherein the third segment is configured to be secured to an insertion tool used to insert said rod into said portals of said bone anchors.

57. (New) The prosthesis of Claim 14, wherein said rod includes a central lumen, which is configured such that said rod can be advanced over a guidewire.

58. (New) The prosthesis of Claim 14, wherein said first segment has distal end and said transverse portal is configured such that said distal end of said first segment can be advanced through a first end of said portal.

59. (New) The prosthesis of Claim 14, wherein said first segment has distal end and said transverse portal is configured such that said distal end of said first segment can be advanced entirely through said transverse portal.

60. (New) A prosthesis for minimally invasive posterior fixation, comprising:

- a first bone anchor having a head and a transverse portal extending through said head along an axis transverse to a central axis of said first bone anchor;

- a second bone anchor having a head and a transverse portal extending through said head along an axis transverse to a central axis of said second bone anchor;

- a first segment of a rod extending through said transverse portal of said first bone anchor, said first segment defining a first surface, said first segment being configured

such that it can be advanced entirely through said transverse portal of said second bone anchor;

a second segment of a rod having a second complementary surface;

a joint formed at least in part by said first surface and said second surface; and

a locking cap that is configured for lateral movement within said head of said first bone anchor and is configured such that lateral movement within said head secures said first segment within said portal and fixes the angular relationship of the joint.

61. (New) The prosthesis of Claim 60, wherein said rod is adapted to be detachably secured to an insertion tool used to insert said rod into said portal.

62. (New) The prosthesis of Claim 60, further comprising a third segment of the rod, said third segment defining a socket for receiving a ball positioned on said second segment.

63. (New) The prosthesis of Claim 62, further comprising a cap for the second bone anchor that in response to lateral movement secures said third segment within the portal of the second bone anchor and fixes the angular relationship between the third and second segments.

64. (New) The prosthesis assembly of Claim 63, wherein the third segment is configured to be secured to an insertion tool used to insert said rod into said portals of said bone anchors.

65. (New) The prosthesis of Claim 60, wherein said rod includes a central lumen, which is configured such that the rod can be advanced over a guidewire.

66. (New) The prosthesis of Claim 60, wherein said first segment has distal end and said transverse portal of said first bone anchor is configured such that said distal end of said first segment can be advanced through a first end of said transverse portal of said first bone anchor.

67. (New) The prosthesis of Claim 60, wherein said first segment has distal end and said transverse portal is configured such that said distal end of said first segment can be advanced entirely through said transverse portal of said first bone anchor.

68. (New) A prosthesis for minimally invasive posterior fixation, comprising:
a bone anchor having a head;
a transverse portal extending through said head along an axis transverse to a central axis of said bone anchor;
a first segment of a rod extending through said transverse portal, said first segment defining a first surface;
a second segment of a rod having a second complementary surface;
a joint formed at least in part by said first surface and said second surface;
means for securing said first segment within said portal and fixing the angular relationship of the joint; and
a guidewire lumen extending through said first and second segments of the rod.
69. (New) The prosthesis of Claim 68, wherein said rod is adapted to be detachably secured to an insertion tool used to insert said rod into said portal.
70. (New) The prosthesis of Claim 68, wherein further comprising a third segment of the rod, said third segment defining a socket for receiving a ball positioned on said second segment.
71. (New) The prosthesis of Claim 70, wherein said guidewire lumen extends through said third segment
72. (New) The prosthesis assembly of Claim 70, wherein the third segment is configured to be secured to an insertion tool used to insert said rod into said portals of said bone anchors.
73. (New) A prosthesis for minimally invasive posterior fixation, comprising:
a first bone anchor having a head and a transverse portal extending through said head along an axis transverse to a central axis of said first bone anchor;
a second bone anchor having a head and a transverse portal extending through said head along an axis transverse to a central axis of said second bone anchor;
a first segment of a rod extending through said transverse portal of said first bone anchor, said first segment defining a first surface;
a second segment of a rod having a second complementary surface;

a joint formed at least in part by said first surface and said second surface, said joint configured to allow an angular orientation of said first and second segments to be adjusted within a cone having a vertex located between said first and second bone anchors; and

a locking cap which in response to lateral movement secures said first segment within said transverse portal of said first bone anchor and fixes the angular relationship of the joint.

74. (New) The prosthesis of Claim 73, wherein said rod is adapted to be detachably secured to an insertion tool used to insert said rod into said portal.

75. (New) The prosthesis of Claim 73, wherein further comprising a third segment of the rod, said third segment defining a socket for receiving a ball positioned on said second segment.

76. (New) The prosthesis of Claim 73, wherein said first segment and second segment include a central lumen, which is configured such that the first and second segments can be advanced over a guidewire.

77. (New) The prosthesis of Claim 73, wherein said first segment is configured such that it can be advanced entirely through said transverse port of said second bone anchor.